

**ROBUST DATA TRANSMISSION USING BROADCAST DIGITAL TELEVISION
SIGNALS**

ABSTRACT OF THE DISCLOSURE

A DTV signal includes frames, and the frames include data segments. Data segments are replaced by codewords which represent digital data. The DTV signals are broadcast and received by receivers. The receivers recover the digital data from the codewords in the DTV signals, for example by using matched filtering. By using long codewords, the digital data can be broadcast over a longer range and recovered by simpler circuitry in comparison to the television programming contained in the DTV signal. In one implementation, the DTV signal is an American Television Standards Committee (ATSC) DTV signal.